

# The Effect of Liquidity, Leverage, and Profitability on Firm Value with Firm Size as Moderating Variable

Leni Yuliyanti<sup>1,\*</sup> Ikaputera Waspada<sup>2</sup> Maya Sari<sup>3</sup> Nugraha Nugraha<sup>4</sup>

<sup>1</sup> Universitas Pendidikan Indonesia

<sup>2</sup> Universitas Pendidikan Indonesia

<sup>3</sup> Universitas Pendidikan Indonesia

<sup>4</sup> Universitas Pendidikan Indonesia

\*Corresponding author. Email: [leniyuliyanti@upi.edu](mailto:leniyuliyanti@upi.edu)

## ABSTRACT

The purpose of this study was to determine the effect of liquidity, leverage, and profitability on firm value, with firm size as the moderating variable. This research used the descriptive verification method. The population in this study was the mining sector companies listed on the Indonesia Stock Exchange with a total of 77 companies, and 40 companies were obtained as samples with purposive sampling technique. The data used is sourced from the 2013-2018 financial statements. The analysis technique uses MRA analysis. The results showed that liquidity and profitability did not affect firm value. Leverage had a positive effect on the company. Furthermore, firm size did not moderate the liquidity and profitability of the company but moderates the effect of leverage on firm value. This shows that leverage is a positive signal that is responded to by investors so that it will increase the value of the company.

**Keywords:** *Liquidity, Leverage, Profitability, Firm Value, Firm Size.*

## 1. INTRODUCTION

The establishment of a company has a purpose, one of which is to increase the company's value. By increasing the company's value, it will increase the welfare of the owner of the company. The increase in company value can be seen from the increase in stock prices. Stock prices occur because of supply and demand. If the company shows good financial performance (financial ratios including liquidity, profitability, and leverage), it will attract investors to invest in the company.

Investments can be made in the capital market. Today the capital market in Indonesia is growing. The development of the capital market is one of the indicators of the economy in Indonesia. The development of the capital market can be shown by the growth of investors, especially individual investors. Thus, the choice of financial specialists in securities exchanges plays an important role in determining market developments, which in turn manage the economy. An increase in the number of investors will increase stock trading activity. This indicates that the companies are performing well and that business activities are running well. One of the indicators for determining investment by investors is the

company's value. The increasing value of the company indicates an increase in shareholder wealth. This will increase the interest of investors to buy company shares. The company's value can be seen from various indicators, including the share price, which can be seen from the financial ratios, namely PER, PBV, and Tobin Q. PBV is a market assessment of the value of a company's shares. A high PBV indicates that the market values the company well. PBV can be used to maximize firm value with shareholders [1]. A higher PBV indicates a lower book value with net operating assets. With PBV, it will increase shareholder profit growth [2].

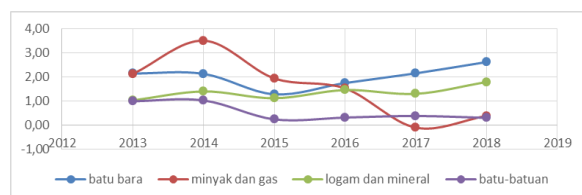
The financial performance of a company is one of the factors that affect the company's value. Financial performance is a signal for investors. Investors will respond to the financial performance, whether bad news or good news. When the signal is responded well and positively, it will increase the stock price. An increase in stock prices indicates an increase in the market value valued by investors so that the company's value will also increase. Financial performance that affects firm value include liquidity, leverage, and profitability [3]

Liquidity shows the company's ability to pay off its debts. High-value liquidity shows that the company can

meet short-term obligations. The higher the value of liquidity, the higher the company's value. This is in line with the research results [4]. However, it is different from the results of research [3-8] which shows the results of his research that liquidity has a negative effect on firm value. This means that when liquidity increases, the company's value decreases because, with high liquidity, investors are worried that a lot of cash will be idle and not productive to generate cash or profit. Research [9] provides research results that investors do not determine liquidity as a factor in considering investment choices so that it will not change the company's value.

The use of leverage by the company is considered a positive signal by investors because the use of leverage shows that the company is developing its business to increase the profits that shareholders will receive. The increase in leverage is also considered the use of debt for financing so that tax savings occur, which will increase the company's value. Similar research from [7-12] that leverage has a positive effect on firm value. Low debt capital structure plays a dominant role in maximizing firm value [13]. Meanwhile, research [14] shows that capital structure does not affect firm value. When the company's profits increase, investors will respond to it as a positive signal. This will attract more investors to invest in the company. This will increase the stock price. An increase in stock prices will increase the value of the company. This is in line with research [3,7,14,15] which provides research results that profitability has a positive effect on firm value. However, in contrast to the research results [14,15], the results show no relationship between profitability and firm value.

As a company on the IDX, the mining sector has an average company value, with PBV indicators fluctuating in 2013-2018. The trend of declining company value is found in the oil and gas sub-sector and the rocks sub-sector. If the company's value is decreasing, the average development of the PBV value is as shown in Figure 1.



**Figure 1.** Development of Mining Subsector Company Value in 2013-2018

Fluctuations in the company's value, especially with a downward trend, will be a negative signal for investors. This causes investors to no longer be interested in the company so that the stock price will fall, which impacts the decline in the company's value. Based on the problem phenomenon and there is still a research gap between several studies, Kai is interested in doing this research again by developing the use of firm size as a moderating variable. Therefore, this study aims to determine how the

influence of liquidity, leverage, and profitability on the price of firm value and how the influence of firm size in moderating the influence of liquidity, leverage, and profitability on firm value. This study refers to previous research and sees how it is moderated by company size, thus providing a reference for research on company value in the mining sector companies listed on the Indonesia Stock Exchange.

## 1.1. Literature review

### 1.1.1. Effect of Liquidity on Firm Value

Liquidity indicates the company's ability to meet its obligations, especially short-term obligations. The size of the liquidity will be a reference for investors, creditors, and suppliers who will provide loans to the company. One indicator of liquidity is the current ratio. The current ratio is a comparison between current assets and current liabilities. The size of the current ratio will show how much the company is able to meet its obligations. The higher the current ratio, the easier it is for the company to fulfill its obligations. This will make investors interested in investing in the company, consequently increasing the company's value. It is as produced by [3-7,16] that liquidity increases firm value.

Ha1; Liquidity affects the value of the company

### 1.1.2. The Effect of Leverage on Company Value

The trade-off theory states that using debt to a certain extent will benefit the company when using debt provides greater benefits than interest expense. High leverage indicates that the proportion of debt in the company is greater than the proportion of own capital. High leverage is a positive signal for investors because it reflects that the company uses its funds for business development and will be profitable. So this will increase the value of the company [7,10-12].

Ha2; Leverage has a positive effect on firm value

### 1.1.3. The Effect of Profitability on Firm Value

Profitability indicates the company's performance because the profit earned shows its success in its operations. One of the profitability indicators is the return on equity (ROE). Roe is the rate of return on the company's equity. A high ROE will indicate the better the company's performance so that it will cause investors to be interested in investing their capital. So that the more interest in the company's shares, the stock price will rise., which will eventually increase the value of the company. This is as shown by the results of research [3,7,10,15].

Ha3; Profitability has a positive effect on firm value.

## 2. METHODS

In this study, descriptive and verification research methods were used. The descriptive method is used to describe the variables of liquidity, profitability, leverage, firm size, and firm value. The verification method is used to test the effect of liquidity and profitability on the value of the company population in this study, namely mining sector companies with a total of 77 companies using the purposive sampling technique. The sample used was 40 companies. Panel data is used in this study in the form of secondary data obtained from financial reports and stock prices for the period 2013 to 2018, so that there are 240 pieces of observational data. The data can be downloaded through the pages [www.IDX.co.id](http://www.IDX.co.id) and [yahoo.finance.com](http://yahoo.finance.com).

Quantitative data analysis using eviews ten programs. This is done to see the description of the independent variables (liquidity, profitability, leverage) and moderating variable (firm size). The dependent variable, namely the company's value through the minimum, maximum, and average values of each indicator. Liquidity uses the current ratio indicator, profitability uses the ROE indicator, leverage uses the DER indicator, firm size uses the natural log indicator of total assets, and firm value uses the PBV indicator. In this study, MRA regression analysis was used.

## 3. RESULTS AND DISCUSSION

### 3.1. Descriptive Analysis

The description of the research variables consisting of firm value, liquidity, profitability, leverage, and firm size are presented descriptively in table 1. Based on the output eviews, it is known that the number of observations is 240, the liquidity variable (CR) has a minimum value of 5.239, a maximum value of 11131.26, and an average of 309.35. The leverage variable with the DER indicator has an average value of 1.5, a minimum value of -24.11, and a maximum value of 34.05. The profitability variable with the ROE indicator has a minimum value of -3.16. A maximum value of 6.16 with an average of 0.05. The moderating variable is firm size, with the LnSize indicator having a minimum value of 25.57, a maximum value of 32.28, and an average of 29.22. Furthermore, for the dependent variable, the firm value with the PBV indicator has a minimum value of -7.43, a maximum value of 26.46, and an average value of 1.81.

### 3.2. Regression Analysis

Based on the panel data estimation model selection test results through the chow test, Housman test, and LM test, the right model is determined to be used in the

random-effects model. The results are as in table 1. From this table, a regression equation can be made

$$PBV = 5.342 + 1.61CR + 0.47DER + 0.415ROE + 0.14LnSize + e$$

**Table 1** Multiple Regression Equation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.342800	4.811856	1.110341	0.2680
X1	1.61E-05	0.000143	0.113085	0.9101
X2	0.471050	0.036354	12.95715	0.0000
X3	0.415756	0.278533	1.492662	0.1369
X4	-0.146794	0.164545	-0.892125	0.3732

### 3.3. Coefficient of Determination Analysis

The coefficient of determination explains how the model's ability to explain changes in the dependent variable is. The coefficient of determination in this model is 0.49, this shows that changes in the firm value variable (PBV) are influenced by 49% by the independent variable and the rest is influenced by other factors not examined.

#### F test

The F test was carried out to see the feasibility of the model (goodness of fit) in this study. Test. Based on table 2, it is known that the prob value (F-statistic) is 0.000, meaning that the model in this study is fit, so this model is feasible to use and can be used to draw conclusions.

**Table 2** Model Feasibility Test

R-squared	0.507373	Mean dependent var	0.764422
Adjusted R-squared	0.498987	SD dependent var	2.453687
SE of regression	1.736775	Sum squared resid	708.8509
F-statistics	60.50847	Durbin-Watson stat	0.933294
Prob(F-statistic)	0.000000		

#### T-test

To find out the significance of the regression model then t-test was performed. Based on table 1, it is known that the probabilistic value for the variables X1, X3, X4 > 0.05, it can be concluded that the liquidity and profitability variables have no significant effect on firm value. While the X2 variable has a probability value of <0.05, meaning that leverage has a positive effect on firm value.

#### MRA Test

Based on the test results, it is known that Firm size does not moderate the profitability and liquidity variables on firm value. However, firm size moderates the leverage variable on firm value. This data is seen in table 3. In this case, firm size weakens the influence of leverage on firm value. This can be seen from the coefficient of -0.163583.

**Table 3 Coefficient of Moderated Regression Analysis**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
M1	-2.35E-05	0.000187	-0.125833	0.9000
M2	-0.163583	0.026163	-6.252464	0.0000
M3	-0.077428	0.163608	-0.473252	0.6365

### 3.4. Discussion

For companies, increasing the company's value is one of the main goals. An increase in company value will increase shareholder wealth. Based on the test results, it is known that the average value of mining companies is 1.808, liquidity is 309.350, leverage is 1.544, profitability is 0.054, and firm size is 29.220. The better liquidity, leverage, and profitability, the better the firm value.

The results of statistical tests show that liquidity and profitability did not affect firm value. This shows that in investing, investors do not pay attention to liquidity and profitability as a determinant of investment decision-making. The results of this study are in line with research [9,14,17].

Based on the results of statistical tests, it is known that leverage has a positive effect on firm value, meaning that increasing leverage will increase firm value. This increase in leverage will be profitable to a certain extent, but if it exceeds a certain limit, it will reduce the company's value; thus, the decision to use debt must be truly optimal. The use of debt will control the use of free cash by the company. Increasing leverage will be a positive signal for investors. The company will use the use of debt for investment activities where the investment will increase its profits to increase the income earned by the company. The increase in profit indicates an increase in the company's performance so that it will attract investors to buy shares, which will increase the share price and the value of the company. The results of this study support research [7,10,11,12]

Firm size does not moderate the effect of liquidity and profitability on firm value. However, firm size moderates the effect of leverage on firm value. The firm size will weaken the effect of leverage on firm value. A large company size determines that the company by assets has great capabilities so that with a large company value, the company does not need to use large amounts of debt. The size of the company will determine the financial resources that will be used by the company, given the importance of company size and financial resources when planning to introduce innovations to improve company performance [18].

## 4. CONCLUSIONS

The study results showed that liquidity and profitability did not affect firm value. This means that liquidity and profitability were not factors that investors consider in investing. Leverage had a positive effect on

firm value. Firm size did not moderate liquidity and profitability to firm value but moderated the effect of leverage on firm value. This showed that leverage was a positive signal that was responded to by investors so that it could increase the value of the company

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